

IN THE CLAIMS:

Please amend Claims 1, 2, and 8, as follows.

1. (Currently Amended) An optical device comprising:

an optical element formed by using a plurality of pillar-shaped members arranged periodically and a pair of support members arranged perpendicularly relative to the direction of arrangement of ~~the~~ said pillar-shaped members so as to sandwich the pillar-shaped members, said optical element showing a periodic structure of periodic distribution of refractive index; and

means for applying force to ~~the~~ said pillar-shaped members by way of the support members in ~~a-direction~~ directions perpendicular to the direction of arrangement of ~~the~~ said pillar-shaped members so as to both expand and compress the pillar-shaped members.

2. (Currently Amended) The optical device according to claim 1, wherein the force applied to ~~the~~ said pillar-shaped members in ~~a-direction~~ directions perpendicular to the direction of arrangement changes not only the height but also the diameter of said pillar-shaped members.

3. (Original) The optical device according to claim 1, wherein said support members are made of a material having a rigidity greater than said pillar-shaped members.

4. (Original) The optical device according to claim 1, wherein the periodic structure does not change its period when said pillar-shaped members are deformed.
5. (Original) The optical device according to claim 1, wherein at least one of said pair of support members is a piezoelectric element.
6. (Original) The optical device according to claim 1, wherein a reflection layer is formed on each of said support members at the side facing said pillar-shaped members.
7. (Original) The optical device according to claim 1, wherein at least one of said pair of support members is fixed to a piezoelectric element and said means for applying mechanical force comprises electrodes arranged on the piezoelectric element and a circuit for applying a voltage to the electrodes.
8. (Currently Amended) A method of modulating an optical characteristic of an optical element formed by using a plurality of pillar-shaped members arranged periodically and a pair of support members arranged perpendicularly relative to the direction of arrangement of ~~the~~ said pillar-shaped members so as to sandwich the pillar-shaped members, said optical element showing a periodic structure of periodic distribution of refractive indexes, wherein the optical characteristic is modulated by applying force to the optical element in ~~a direction~~ directions perpendicular to the direction of arrangement of

the pillar-shaped members so as to both expand and compress the pillar-shaped members
and change ~~and changing~~ the diameter of the pillar-shaped members.